

***Ligidium paulum*, a New Terrestrial Isopod  
from Ashû, Kyoto Prefecture, Japan\***

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京都府芦生から発見されたヒメフナムシの一新種

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1. 京都府北桑田郡美山町にある京都大学農学部付属芦生演習林から採集されたヒメフナムシの一種を新種 *Ligidium paulum* として記載した。これはわが国における本属の2番めの種類である。
2. 本種は、従来わが国で知られていた *L. japonicum* VERHOEFF とは、(1)小型で成熟すること、(2)体表が小顆粒でおおわれること、(3)第2触角の鞭が少ないこと、(4)第1胸節後側縁に剛毛の密生がみられること、(5)口器、尾肢、雄の交尾器の形態などによって区別される。

The taxonomical study of terrestrial isopod crustaceans has been much ignored in Japan. Especially as to the genus *Ligidium*, *L. japonicum* VERHOEFF has long been the single species recorded from this country. It was not until September, 1975, that another form of the genus was discovered by Mr. Jirô TSUKAMOTO, graduated student of Kyoto University, in the Experimental Forest of the Faculty of Agriculture, Kyoto University, in Ashû, Miyama-chô, Kyoto Prefecture. The specimens thus collected were sent to me for identification through the kindness of Mr. TSUKAMOTO, and at closer examinations of mine they have proved to represent a new species of the said genus. The specimens, preserved in alcohol, were dissected and examined in glycerol. All the figures were drawn by using camera lucida. Type specimens are kept at the Osaka Museum of Natural History. Ecological study on the present new species has been done by Mr. J. TSUKAMOTO and will be published in near future.

Before going further, I wish to express my sincere gratitude to Dr. Saburo NISHIMURA of the Seto Marine Biological Laboratory, Kyoto University, for reading the manuscript and to Mr. Jirô TSUKAMOTO for his kindness in placing the interesting material at my disposal.

***Ligidium paulum*, n. sp.**

(Text-figures 1 and 2)

*Description*: Body surface not smooth, with numerous small tubercles. Body color brown in mature specimens but paler in younger ones. No deep pit on the forehead. First pereaeonal somite with 20 to 30 minute bristles in group on hind lateral border. Eyes rather big with 20 to 30 ocelli.

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\* Contributions from the Osaka Museum of Natural History, No. 198.

First antenna with three segments, the terminal of which is almost vestigial. Second antenna with five peduncular segments and six to eight flagellar segments; terminal flagellar segment with a tuft of setae at the tip; there is no marked difference by sex.

Right mandible with three strong biting teeth; lacina mobilis not chitinized; three hairy setae between biting teeth and molar process. Left mandible with three strong biting teeth; lacina mobilis with four chitinized teeth; three hairy bristles between biting teeth and molar process; molar process more highly-crowned in left mandible than in right one. First maxilla with two lobes; outer lobe with three large teeth and two or three smaller teeth, inner lobe with three stout hairy bristles. Second maxilla divided obscurely into two lappets, each with haired tip. Maxilliped with five-segmented endopodite; each segment with one to three stout setae.

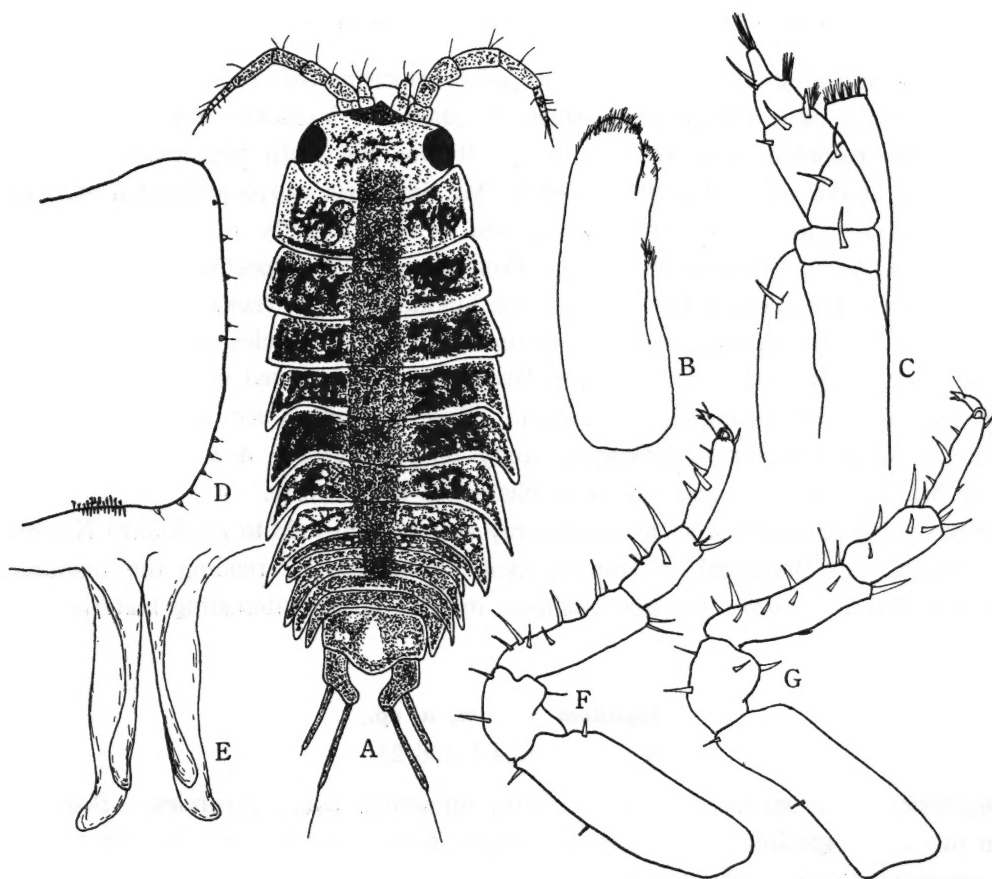


Fig. 1. *Ligidium paulum*, n. sp. A. Dorsal view. B. Second maxilla. C. Maxilliped. D. Hind-lateral border of first peraeonal tergite. E. Penes. F. First peraeopod. G. Second peraeopod. (A, C-D, and F-G, holotype female; B and E, allotype male).

All the peraeopods are similar in shape in both sex. The setae are all of simple type.

Pleopods I and II in male are modified; the endopod of pleopod I with three setae on posterior median corner; pleopod II with a long stylus bearing about five small teeth and a long lappet at the tip.

Uropod with a seta near the base of propodite; exopod somewhat shorter than the

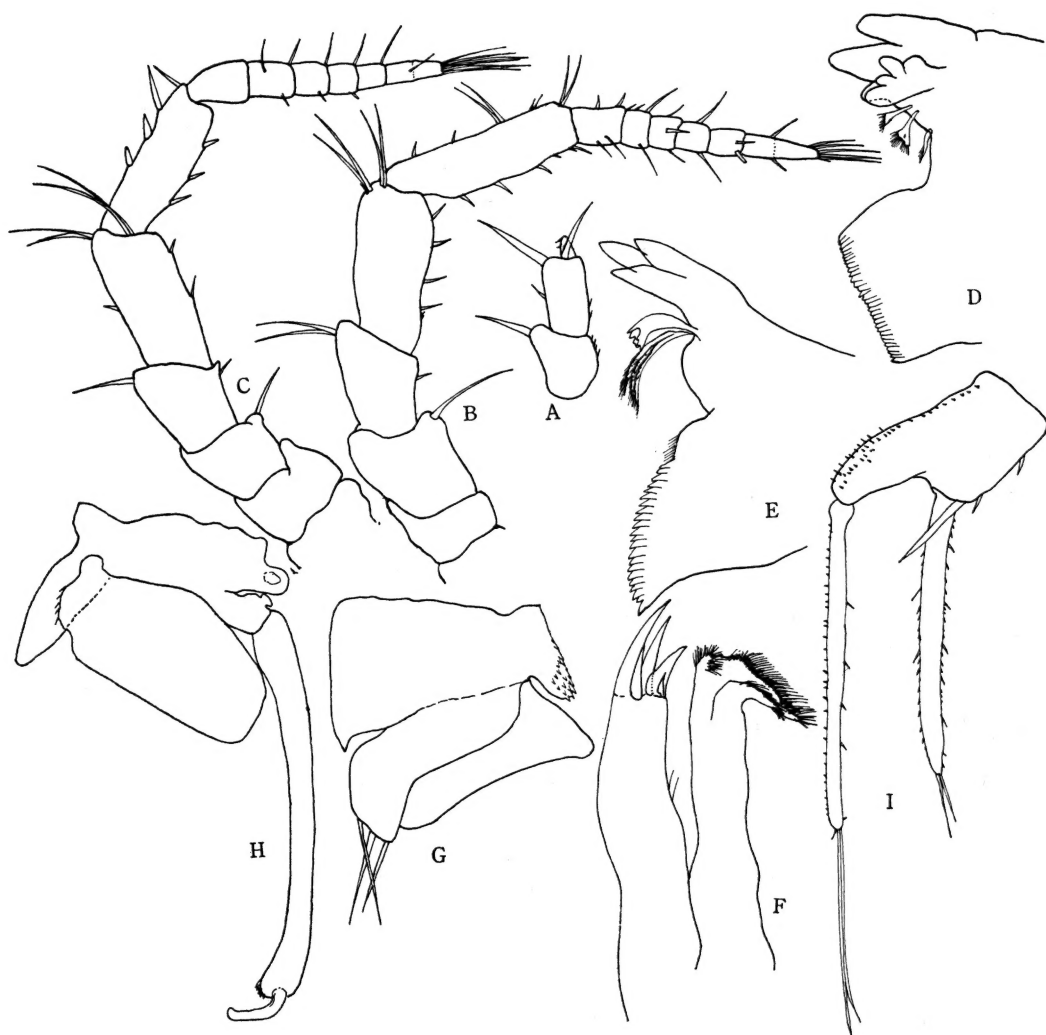


Fig. 2. *Ligidium paulum*, n. sp. A. First antenna. B. Second antenna of female. C. Second antenna of male. D. Left mandible. E. Right mandible. F. First maxilla. G. Male first pleopod. H. Male second pleopod. I. Uropod. (A-B, and F, paratypefemale; C and G-H, allotype male; D-E, paratype male; I. holotype female).

endopod; exopod with three setae at the tip and many small setae at lateral border; endopod with two long setae at the tip and many small setae at lateral border.

*Habitat*: From litter zone to surface soil of Ashû Experimental Forest, altitude between 695 and 735 m.

*Material examined*: 10 ♂♂ (1 ♂ allotype, 2.6 mm in body length, 9 ♂♂ paratypes, 2.3~2.9 mm in body length) and 12 ♀♀ (1 ♀ holotype, 2.5 mm in body length, 11 ♀♀ paratypes 2.4 mm~4.0 mm in body length), Ashû Experimental Forest, Miyama-chô, Kitakuwata-gun, Kyoto Prefecture, coll. Jirô TSUKAMOTO, Sept. 1975. Type specimens are deposited at the Osaka Museum of Natural History, (holotype, OMNH-Ar-648; allotype, OMNH-Ar-649; paratypes, OMNH-Ar-650~669).

*Remarks*: The present new species is found together with *Ligidium japonicum* in Ashû; the former is readily distinguished, however, from the other by the following points: (1) smaller size, (2) rough body surface, (3) less numerous segmented flagellum of second antenna, (4) shape of mouth part, especially of maxilliped, (5) presence of a group of bristles on hind-lateral border of the first peraeonal tergite, (6) shape of stylus of male second pleopod, (7) shape of penes, (8) shape of uropod, and (9) absence of deep groove on forehead.

The present new species seems to be most closely allied to *Ligidium nodulosum* VERHOEFF described from Caucasus, but differs from this in the following points: (1) smaller size, (2) less numerous flagellar segments of second antenna, and (3) setal formula of propodite of the first peraeopod.

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